

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

14225-031001/F1030572US

WHAT IS CLAIMED IS:

1. A circuit device comprising:

first conductive patterns, separated by first separation grooves;

5 second conductive patterns, formed more thinly than the first conductive patterns and separated by second separation grooves;

first circuit element, affixed onto the first conductive patterns;

10 second circuit element, affixed onto the second conductive patterns; and

an insulating resin, covering the circuit element and the conductive patterns while leaving rear surfaces of both of the conductive patterns exposed and filling both of the
15 separation grooves.

2. The device of Claim 1, wherein top surfaces of the first conductive patterns are formed higher than top surfaces of the second conductive patterns.

3. The device of Claim 1, wherein at least one constricted
20 part is provided at a side part of each separation groove that separates the first conductive patterns.

4. The device of Claim 1, wherein the second circuit elements are thicker than the first circuit elements.

14225-031001/F1030572US

5. The device of Claim 1, wherein the sum height of the height of the first circuit element and the height of the first conductive patterns is made equivalent to the sum height of the height of the second circuit element and the height of the second conductive patterns.

6. The device of Claim 1, wherein the first circuit element is semiconductor element.

7. The device of Claim 1, wherein the first circuit element is element that accompany the generation of heat.

10 8. The device of Claim 1, wherein the second circuit element is chip capacitor.

9. The device of Claim 1, wherein wiring parts are formed by the second conductive patterns.

10. A circuit device comprising:
15 first conductive patterns, separated by first separation grooves;

second conductive patterns, formed more thinly than the first conductive patterns, separated by second separation grooves, and forming wiring;

20 circuit element, affixed onto the first conductive patterns; and

an insulating resin, covering the circuit element and the conductive patterns while leaving the rear surfaces of both

14225-031001/F1030572US

of the conductive patterns exposed and filling both of the separation grooves.

11. The device of Claim 10, wherein the top surfaces of the first conductive patterns are formed higher than the top
5 surfaces of the second conductive patterns.

12. The device of Claim 10, wherein at least one constricted part is provided at a side part of each separation groove that separates the first conductive patterns.

13. The device of Claim 10, wherein the circuit element
10 is semiconductor element.

14. The device of Claim 10, wherein the circuit element are element that accompany the generation of heat.

15. A circuit device manufacturing method comprising:
preparing a conductive foil;

15 coating a first resist onto the top surface of the conductive foil;

performing etching while leaving on the first resist at regions at which first conductive patterns are to be formed to thereby form first separation grooves that separate the first
20 conductive patterns and furthermore depressing the conductive foil uniformly at regions at which second conductive patterns are to be formed;

covering the top surfaces of the first conductive patterns

14225-031001/F1030572US

and the top surface of the conductive foil at regions at which the second conductive patterns are to be formed with a second resist and performing etching to form the first separation grooves deeply and form second separation grooves that separate
5 the second conductive patterns;

affixing circuit elements onto both or either of the first conductive patterns and the second conductive patterns;

forming an insulating resin so as to cover the circuit element and fill both of the separation grooves; and

10 removing a rear surface of the conductive foil until the insulating resin filled in both of the separation grooves becomes exposed.

16. The method of Claim 15, wherein by covering side surfaces of the first separation grooves by the second resist and then
15 performing etching, constricted parts are formed at side parts of the first separation grooves.

17. The method of Claim 15, wherein the insulating resin is exposed by partially removing the rear surface of the conductive foil.